

AUTHOR INDEX

- Agrawal, H. C.: see Davis, J. M.
- Altman, J., Das, G. D., and Anderson, W. J.: Effects of Infantile Handling on Morphological Development of the Rat Brain: an Exploratory Study, 10
- Altman, J., Wallace, R. B., Anderson, W. J., and Das, G. D.: Behaviorally Induced Changes in Length of Cerebrum in Rats, 112
- Anderson, R. B. and Rosenblith, J. F.: The Photic Sneezing Reflex in the Human Newborn: A Preliminary Report, 65
- Anderson, W. J.: see Altman, J.
- Arnold, W. J.: see Thoman, E. B.
- Berger, R. J. and Meier, G. W.: Eye Movement during Sleep and Waking in Infant Monkeys (*Macaca mulatta*) Deprived of Patterned Vision, 266
- Berkson, G. and Karrer, R.: Travel Vision in Infant Monkeys: Maturation Rate and Abnormal Stereotyped Behaviors, 170
- Berkson, G.: Development of Abnormal Stereotyped Behaviors, 118
- Bronson, F.: see Scott, J. P.
- Broom, D. M.: Behavior of Undisturbed 1- to 10-day-old Chicks in Different Rearing Conditions, 287
- Burch, J., 209
- Callison, D. A. and Spencer, J. W.: Effect of Chronic Undernutrition and/or Visual Deprivation Upon the Visual Evoked Potential from the Developing Rat Brain, 196
- Candland, D. K. and Mason, W. A.: Infant Monkey Heart Rate: Habituation and Effects of Social Substitutes, 254
- Clarke, G. B.: see Steinberg, A. B.
- Collins, R. L.: see Fuller, J. L.
- Das, G. D.: see Altman, J.
- Davis, J. M., Himwich, W. A., and Agrawal, H. C.: Free Amino Acids of Newborn and Adult Guinea Pig Brain, 24
- Deagle, J. and Furchtgott, E.: Passive Avoidance in Prenatally X-Irradiated Rats, 90
- Defries, J. C.: see Dixon, L. K.
- Denenberg, V. H. and Rosenberg, K. M.: Programming Life Histories: Effects of Maternal and Environmental Variables upon Open-field Behavior, 93
- Denenberg, V. H. and Whimbey, A. E.: Experimental Programming of Life Histories: Toward an Experimental Science of Individual Differences, 55
- Denenberg, V. H., Karas, G. G., Rosenberg, K. M., and Schell, S. F.: Programming Life Histories: An Experimental Design and Initial Results, 3
- Dixon, L. K. and Defries, J. C.: Development of Open-field Behavior in Mice: Effects of Age and Experience, 100
- Dreyfus-Brisac, C.: Sleep Ontogenesis in Early Human Prematurity from 24 to 27 Weeks of Conceptual Age, 162
- Fink, G. B.: see Iturrian, W. B.
- Fox, M. W., Inman, O., and Glisson, S.: Age Differences in Central Nervous Effects of Visual Deprivation in the Dog, 48
- Frey, P. W. and Ross, L. E.: Rabbit Eyelid Conditioning: Effects of Age, Interstimulus Interval, and Intertrial Interval, 276
- Fuller, J. L. and Collins, R. L.: Temporal Parameters of Sensitization for Audiogenic Seizures in SJL/J Mice, 185
- Furchtgott, E.: see Deagle, J.
- Glisson, S.: see Fox, M. W.
- Gottlieb, G.: J. C. Schneirla (1902-1968), 159
- Graziani, L. F.: see Weitzman, E. D.
- Haggett, B. N. and Werboff, J.: Temperature Reduction in Neonatal Mice: Effects on Later Behavior, 257
- Harrington, G. M.: Genetic-environmental Interaction in "Intelligence": I. Biometric Genetic Analysis of Maze Performance of *Rattus norvegicus*, 211
- Harrington, G. M.: Genetic-environmental Interaction in "Intelligence": II. Models of Behavior, Components of Variance, and Research Strategy, 245
- Henderson, N. D.: The Confounding Effects of Genetic Variables in Early Experience Research: Can We Ignore Them?, 146
- Himwich, H. E.: see Shimizu, A.
- Himwich, H. E.: see Davis, J. M.
- Hodges, L. A.: see Riccio, D. C.
- Inman, O.: see Fox, M. W.
- Iturrian, W. B. and Fink, G. B.: Effect of Age and Condition-Test Interval (Days) on an Audio-conditioned Convulsive Response in CF#1 Mice, 230
- Jilek, L.: see Sirakova, I. A.
- Karas, G. G.: see Denenberg, V. H.
- Karrer, R.: see Berkson, G.
- King, J. A.: see Vestal, B. M.
- Klopfer, P. H.: Is Heart Rate an Indicator of Imprinted Preferences and Affect?, 205
- Levine, S.: Influence of Infantile Stimulation on the Response to Stress during Prewaning Development, 67
- Levine, S.: see Thoman, E. B.
- Lindzey, G., Thiessen, D. D., and Tucker, A.: Development and Hormonal Control of Territorial Marking in the Male Mongolian Gerbil (*Meriones unguiculatus*), 97
- Linke, I.: see Schulte, F. J.
- Mason, W. A.: see Candland, D. K.
- Meier, G. W., 77
- Meier, G. W. and Schutzman, L. H.: Mother-infant Interactions and Experimental Manipulation: Confounding or Misidentification?, 141
- Meier, G. W.: see Berger, R. J.
- Menzel, Jr., E. W.: Primate Naturalistic Research and Problems of Early Experience, 175
- Michaelis, R.: see Schulte, F. J.
- Mitchell, G. and Stevens, C. W.: Primiparous and Multiparous Monkey Mothers in a Mildly Stressful Social Situation: First Three Months, 280
- Newton, G., 1
- Nolte, R.: see Schulte, F. J.
- Prechtl, H. F. R., 161
- Ramwell, P. W.: see Steinberg, A. B.
- Riccio, D. C., Rohrbaugh, M., and Hodges, L. A.: Developmental Aspects of Passive and Active Avoidance Learning in Rats, 108
- Rohrbaugh, M.: see Riccio, D. C.
- Rose, G. H.: The Development of Visually Evoked Electrocortical Responses in the Rat, 35
- Rosenberg, K. M.: see Denenberg, V. H.
- Rosenblith, J. F.: see Anderson, R. B.
- Ross, L. E.: see Frey, P. W.
- Rychlik, I.: see Sirakova, I. A.
- Schell, S. F.: see Denenberg, V. H.
- Schulte, F. J., Linke, I., Michaelis, R., and Nolte, R.: Electromyographic Evaluation of the Moro Reflex in Preterm, Term, and Small-for-dates Newborn Infants, 41
- Schutzman, L. H.: see Meier, G. W.

- Scott, J. P., Bronson, F., and Trattner, A.: Differential Human Handling and the Development of Agonistic Behavior in Basenji and Shetland Sheep Dogs, 133
- Shideman, F. E.: see Sparber, S. B.
- Shimizu, A. and Himwich, H. E.: Effect of LSD on the Sleep Cycle of the Developing Kitten, 60
- Sirakova, I. A., Sirakov, L. M., Jilek, L., and Rychlik, I.: Synthesis of Rapidly-labelled Brain RNA in the Rat During Stagnant Hypoxia in the Course of Ontogeny, 189
- Sirakov, L. M.: see Sirakova, I. A.
- Sparber, S. B. and Shideman, F. E.: Prenatal Administration of Reserpine: Effect upon Hatching, Behavior, and Brainstem Catecholamines of the Young Chick, 236
- Spencer, J. W.: see Callison, D. A.
- Steinberg, A. B., Clarke, G. B., and Ramwell, P. W.: Effects of Maternal Essential Fatty-acid Deficiency on Neonatal Rat Brain, 225
- Stevens, C. W.: see Mitchell, G.
- Thiessen, D. D.: see Lindzey, G.
- Thoman, E. B. and Arnold, W. J.: Incubator Rearing of Infant Rats Without the Mother: Effects on Adult Emotionality and Learning, 219
- Thoman, E. B., Levine, S., and Arnold, W. J.: Effects of Maternal Deprivation and Incubator Rearing on Adrenocortical Activity in the Adult Rat, 21
- Trattner, A.: see Scott, J. P.
- Tucker, A.: see Lindzey, G.
- Vestal, B. M. and King, J. A.: Relationship of Age at Eye Opening to First Optokinetic Response in Deermice (*Peromyscus*), 30
- Wallace, R. B.: see Altman, J.
- Weitzman, E. D. and Graziani, L. F.: Maturation and Topography of the Auditory Evoked Response of the Prematurely Born Infant, 79
- Werboff, J.: see Haggett, B. N.
- Whimbey, A. E.: see Denenberg, V. H.

SUBJECT INDEX

- Abnormal, 118
- Activation-inhibition, 211
- Active avoidance, 108
- Activity, 100
- Adrenal, 67
- Adult, 24
- Affect, 205
- Age, 100, 276
 - dependent seizure susceptibility, 230
 - differences, 108
- Agonistic behavior, 280
 - development in dogs, 133
- Amino acids, 24
- Aspartic acid, 24
- Audiogenic seizures, 185, 230
- Auditory evoked response, 79
- Autoradiography, 10
- Avoidance conditioning, 90
 - learning, 3
- Behavior genetics, 146, 211, 245
 - theory, 245
- Behavioral development, 257
 - teratology, 236
- Birth order, 280
- Brain, 24, 225
 - development, 10
 - maturation, 79
 - RNA synthesis, 189
- Cardiac activity, 205
- Castration, 97
- Catecholamines, 236
- Central nervous system, 48
- Cerebral cortex, 112
- Chick behavior, 287
- Classical conditioning, 276
- Conditioned avoidance response, 236
- Convulsibility, 185
- Corticosterone, 67
 - stress, 21
- Critical period, 48
- CS-US interval, 276
- Deermouse, 30
- Defecation, 100
- Delay of reinforcement, 211
- Deprivation, 48
- Development, 60, 67, 97, 100, 287
- Developmental, 108, 276
 - neurophysiology, 35
 - synchrony, 30
- Dog, differential handling and agonistic behavior, 133
- Domestic fowl, 236
- Dopamine, 48
- Early experience, 3, 55, 67, 141, 146, 219, 257, 280
 - learning, 287
 - social isolation, 219
- ECoG, 196
- Ecology, 175
- Electric shock, 205
- Electrocardiogram, 162
- Electrocortical responses, 35
- Electroencephalogram, 60, 79, 162
- Electromyogram, neck muscles, 60
- Emotion, 254
- Emotionality, 55, 146
- Enrichment, 112
- Environment, 196
 - complexity, 287
- EOG, 266
- Essential fatty acid deficiency, 225
- Ethology, 175
- Experience, 100
- Experimenter effects, 280
- Exploration, 55
- Eyelid conditioning, 276
- Eye movement, 266
 - movements, 162
 - opening, 30
- Fear, 108
- Fetalization, 10
- Field vs. laboratory studies, 175
- Following-response, 205
- Free environment, 3, 55
- GABA, 24
- Genetic-environmental interaction, 245
- Genetics, 146
- Genetic selection, 30
- Gerbil, 97
- Gland size, 97
- Glutamic acid, 24
- Glutamine, 24
- Guinea pig, 24
- Handling, 3, 55, 112, 146
- Heart rate, 254
- Hebb-Williams maze, 219
- Heredity and environment, 10
- Human infant, 79
- Imprinting, 236, 287
 - ducklings, 205
- Incubator rearing of infant rats, 21
- Infancy, 254
- Infant monkey, 170
- Infant/object dependence, 254
- Infant rats, 21
- Infantile experience, 48
 - handling, 10
 - stimulation, 3, 55, 146
 - visual deprivation, 266
- Intelligence, 211, 245
- Intertrial interval, 276
- Interstimulus interval, 276
- Isolation, 118
- Learning, 108
- Lipid and phospholipid, 225
- Lysergic acid diethylamide, 60
- Macaca mulatta*, 280
- Macaque, 118
- Maternal age, 280
 - behavior, 118, 141, 225, 280
 - deprivation, 21, 219
 - experience, 280
 - overprotection, 280
- Maturation, 35, 48, 79, 170, 196, 287
 - rate, 30
- Maze performance, 211
 - rat, 245
- Metabolic adaptation, 189
- Mice, 100, 185
- Monkey, 254
- Moro reflex, 41
- Mother-infant interaction, 175
- Motor development, 41
- Mouse maturation, 257
- Multiple sclerosis, 225
- Myelin, 225
- Neonatal studies, 41
 - thermoregulation, 257
- Neuro-behavioral development, 230
- Neurogenesis, 10
- Neuro-oncogenic critical period, 230
- Newborn, 24
- Noradrenalin, 48
- Novel environment, 280
- Nystagmus, 266
- Ontogenesis, 162
- Ontogeny, 189
- Open field, 146, 219
 - behavior, 3, 55, 100
- Optokinetic response, 30
- Passive avoidance, 90, 108
- Peromyscus*, 30
- Phenotypic behavior, 146
- Photic sneeze in neonates, 65
- Preferred activities, 287
- Premature infant, 79
- Prematurity, 162
- Prenatal X-irradiation, 90
- Primate, 118
 - behavior, 280
- Primates, 175
- Primiparous mothering, 280
- Prostaglandins, 225
- Psychogenetics, 146
- Rabbits, 276
- Radiation and behavior, 90
- Rat, 211
- Rats, 90
 - early experience, 219
 - early social isolation, 219
 - incubator-rearing, 219
 - maternal deprivation, 219
- REMs, 266
- REM sleep, 60
- Repetitive stimulation, 196
- Research-design, 245
- Reserpine, 236
- Rhesus monkeys, 266
- Sensitive period, 185
- Sex differences, 141
- Sibling aggression, dogs, 133
- Sleep, 79, 162, 266
 - cycle, kittens, 60
- Sneezing to light, 65
- Social deprivation, 21, 219
 - rearing, 287
 - stress, 280
- Sound-induced convulsions, 230
- Species comparison, 30
- Stagnant hypoxia, 189
- Stereotyped behavior, 170
- Stereotype, 118
- Strain difference, 100, 146
- Stress, 67, 146
- Subcortical visual structures, 196
- Telemetry, 205
- Temperature reduction, 257
- Territorial marking, 97
- Testosterone propionate, 97
- Treatment times genotype interactions, 146
- Undernutrition, 196
- Vision, 35, 266
- Visual acuity, 30
 - defect, 170
 - deprivation, 196
 - development, 30
 - evoked potential, 35
 - evoked potentials, 48
 - experience, 30
 - function in newborns, 65
 - occlusion, 48
 - stimulation, 65
 - training, 112
- X-irradiation, 90

DEVELOPMENTAL PSYCHOBIOLOGY

VOLUME 1, 1968

EDITOR-IN-CHIEF

GRANT NEWTON

*Department of Psychology
University of California
Riverside, California 92502, U.S.A.*

ASSOCIATE EDITORS

WILLIAMINA A. HIMWICH

Galesburg

GILBERT W. MEIER

Nashville

AUSTIN H. RIESEN

Riverside

REGIONAL EDITORS

M. BERGSTRÖM, *Institute of Physiology, University of Helsinki, Sillavuorenpenger 20, Helsinki, Finland*

JOHN E. DESMEDT, *Brain Research Unit, University of Brussels, 115 Boulevard de Waterloo, Brussels 1, Belgium*

ELIO GARCIA-AUSTT, *Instituto de Neurologia, Hospital de Clinicas, Montevideo, Uruguay*

B. J. KEY, *Department of Experimental Neuropharmacology, The Medical School, Birmingham 15, United Kingdom*

H. F. R. PRECHTL, *Department of Developmental Neurology, University of Groningen, Oostersingel 59, Groningen, The Netherlands*

TH. RABINOWICZ, *Division Autonome de Neuropathologie, Hospital Cantonal Universitaire, Rue de Bugnon 17, Lausanne, Suisse*

FRANZ J. SCHULTE, *Universitäts-Kinderklinik und Poliklinik, Humboldtallee 38, 34 Göttingen, West Germany*

STEN SKOGLUND, *Department of Anatomy, Karolinska Institutet, Stockholm, Sweden*

BOARD OF ADVISORY EDITORS

J. ALTMAN, *Lafayette*

J. A. AMBROSE, *London*

I. A. ARSHAVSKY, *Moscow*

M. BALABAN, *East Lansing*

JAMES E. BIRREN, *Los Angeles*

W. H. BRIDGER, *Bronx*

URIE BRONFENBRENNER, *Ithaca*

BETTYE M. CALDWELL, *Little Rock*

VICTOR H. DENENBERG, *Lafayette*

J. T. EAYRS, *Birmingham*

SAMUEL EIDUSON, *Los Angeles*

ROBERT J. ELLINGSON, *Omaha*

JOHN L. FULLER, *Bar Harbor*

HERMAN HARVEY, *Los Angeles*

JOHN A. KING, *East Lansing*

RITA LEVI-MONTALCINI, *St. Louis*

SEYMOUR LEVINE, *Palo Alto*

DONALD B. LINDSLEY, *Los Angeles*

E. MANGHI, *Milan*

W. A. MASON, *Covington*

A. MINKOWSKI, *Paris*

H. MOLTZ, *Brooklyn*

E. NOIROT, *Brussels*

HANUŠ PAPOUŠEK, *Prague*

DOMINICK P. PURPURA, *Bronx*

JAY S. ROSENBLATT, *Newark*

MARK R. ROSENZWEIG, *Berkeley*

J. P. SCHADÉ, *Amsterdam*

THE SCHREIBELS, *Los Angeles*

J. SCHERRER, *Paris*

T. C. SCHNEIRLA, *New York*

J. P. SCOTT, *Bowling Green*

G. TÖNDURY, *Zürich*

HIDEOMI TUGE, *Tokyo*

M. X. ZARROW, *Lafayette*

Interscience Publishers

a division of JOHN WILEY AND SONS, INC. • NEW YORK • LONDON • SYDNEY

Copyright © 1969 by John Wiley & Sons, Inc.

CONTENTS

Volume 1, Issues Nos. 1-4, 1968

Issue Number 1, March

EDITORIAL: A FORUM FOR DEVELOPMENT	Grant Newton	1
PROGRAMMING LIFE HISTORIES: AN EXPERIMENTAL DESIGN AND INITIAL RESULTS	Victor H. Denenberg, George G. Karas, Kenneth M. Rosenberg, Stephen F. Schell	3
EFFECTS OF INFANTILE HANDLING ON MORPHOLOGICAL DEVELOPMENT OF THE RAT BRAIN: AN EXPLORATION STUDY	Joseph Altman, Gopal D. Das, William J. Anderson	10
EFFECTS OF MATERIAL DEPRIVATION AND INCUBATOR REARING ON ADRENOCORTICAL ACTIVITY IN THE ADULT RAT	Evelyn B. Thoman, Seymour Levine, William J. Arnold	21
FREE AMINO ACIDS OF NEWBORN AND ADULT GUINEA PIG BRAIN	Jimmie M. Daris, Williamina A. Himwich, Harish C. Agrawal	24
RELATIONSHIP OF AGE AT EYE OPENING TO FIRST OPTOKINETIC RESPONSE IN DEERMICE (<i>Peromyscus</i>)	Bedford M. Vestal, John A. King	30
THE DEVELOPMENT OF VISUALLY EVOKED ELECTROCORTICAL RESPONSES IN THE RAT	Guenter H. Rose	35
ELECTROMYOGRAPHIC EVALUATION OF THE MORO REFLEX IN PRETERM, TERM, AND SMALL-FOR-DATE NEWBORN INFANTS	F. J. Schulte, Ilona Linke, R. Michaelis, Renate Nolte	41
AGE DIFFERENCES IN CENTRAL NERVOUS EFFECTS OF VISUAL DEPRIVATION IN THE DOG	M. W. Fox, O. Inman, S. Glisson	48
EXPERIMENTAL PROGRAMMING OF LIFE HISTORIES: TOWARD AN EXPERIMENTAL SCIENCE OF INDIVIDUAL DIFFERENCES	Victor H. Denenberg, Arthur E. Whimbey	55
EFFECT OF LSD ON THE SLEEP CYCLE OF THE DEVELOPING KITTEN	Akira Shimizu, Harold E. Himwich	60
THE PHOTIC SNEEZE REFLEX IN THE HUMAN NEWBORN: A PRELIMINARY REPORT	Rebecca B. Anderson, Judy F. Rosenbluth	65
INFLUENCE OF INFANTILE STIMULATION ON THE RESPONSE TO STRESS DURING PREWEANING DEVELOPMENT	Seymour Levine	67
Letters		71
Book Notices		73
Announcements		76

Issue Number 2, June

EDITORIAL: THE HALF-TOLD TALE AND THE HALF REPLICATION	Gilbert W. Meier	77
MATURATION AND TOPOGRAPHY OF THE AUDITORY EVOKED RESPONSE OF THE PREMATURELY BORN INFANT	Elliot D. Weitzman, Leonard F. Graziani	79

iv CONTENTS

PASSIVE AVOIDANCE IN PRENATALLY X-IRRADIATED RATS	John Deagle, Ernest Furchtgott	90
PROGRAMMING LIFE HISTORIES: EFFECTS OF MATERNAL AND ENVIRONMENTAL VARIABLES UPON OPEN-FIELD BEHAVIOR	Victor H. Denenberg, Kenneth M. Rosenberg	93
DEVELOPMENT AND HORMONAL CONTROL OF TERRITORIAL MARKING IN THE MALE MONGOLIAN GERBIL (<i>Meriones unguiculatus</i>)	Gardner Lindzey, D. D. Thiessen, Ann Tucker	97
DEVELOPMENT OF OPEN-FIELD BEHAVIOR IN MICE: EFFECTS OF AGE AND EXPERIENCE	Linda K. Dixon, J. C. Defries	100
DEVELOPMENTAL ASPECTS OF PASSIVE AND ACTIVE AVOIDANCE LEARNING IN RATS	David C. Riccio, Michael Rohrbaugh, Louis A. Hodges	108
BEHAVIORALLY INDUCED CHANGES IN LENGTH OF CEREBRUM IN RATS	Joseph Altman, Robert B. Wallace, William J. Anderson, Gopal D. Das	112
DEVELOPMENT OF ABNORMAL STEREOTYPED BEHAVIORS	Gershon Berkson	118
DIFFERENTIAL HUMAN HANDLING AND THE DEVELOPMENT OF AGNOSTIC BEHAVIOR IN BASENJI AND SHETLAND SHEEP DOGS	J. P. Scott, Frank Bronson, Alice Trattner	133
MOTHER-INFANT INTERACTIONS AND EXPERIMENTAL MANIPULATION: CONFOUNDING OR MISIDENTIFICATION?	Gilbert W. Meier, Lloyd H. Schutzman	141
THE CONFUSION EFFECTS OF GENETIC VARIABLES IN EARLY EXPERIENCE RESEARCH: CAN WE IGNORE THEM?	Norman D. Henderson	146
Letters		153
Book Notices		155
Announcements		158

Issue Number 3, September

T. C. SCHNEIRLA (1902-1968)	Gilbert Gottlieb	150
EDITORIAL: CROSSING THE BORDERS	Heinz F. R. Precht	161
SLEEP ONTOGENESIS IN EARLY HUMAN PREMATUREITY FROM 24 TO 27 WEEKS OF CONCEPTUAL AGE	C. Dreyfus-Brisac	162
TRAVEL VISION IN INFANT MONKEYS: MATURATION RATE AND ABNORMAL STEREO- TYPED BEHAVIORS	Gershon Berkson, Rathe Karrer	170
PRIMATE NATURALISTIC RESEARCH AND PROBLEMS OF EARLY EXPERIENCE	E. W. Menzel Jr.	175
TEMPORAL PARAMETERS OF SENSITIZATION FOR AUDIOGENIC SEIZURES IN SJL/J MICE	John L. Fuller, Robert L. Collins	185
SYNTHESIS OF RAPIDLY-LABELED BRAIN RNA IN THE RAT DURING STAGNANT HYPOXIA IN THE COURSE OF ONTOGENY	J. A. Sirakora, L. M. Sirakov, L. Jilek, I. Rychlik	189

EFFECT OF CHRONIC UNDERNUTRITION AND/OR VISUAL DEPRIVATION UPON THE VISUAL EVOKED POTENTIAL FROM THE DEVELOPING RAT BRAIN	David A. Callison, John W. Spencer	196
IS HEART RATE AN INDICATOR OF IMPRINTED PREFERENCES AND AFFECT?	Peter H. Klopfer	205
APPENDIX	Joseph Burch	209
GENETIC-ENVIRONMENTAL INTERACTION IN "INTELLIGENCE": I. BIOMETRIC GENETIC ANALYSIS OF MAZE PERFORMANCE OF <i>Rattus norvegicus</i>	Gordon M. Harrington	211
INCUBATOR REARING OF INFANT RATS WITHOUT THE MOTHER: EFFECTS ON ADULT EMOTIONALITY AND LEARNING	Evelyn B. Thoman, William J. Arnold	219

Issue Number 4, December

EDITORIAL: THE BIOLOGICAL UNIQUENESS OF THE ORGANISM	The Scheibels	223
EFFECTS OF MATERNAL ESSENTIAL FATTY-ACID DEFICIENCY ON NEONATAL RAT BRAIN	Alan B. Steinberg, Gregory B. Clarke, Peter W. Ramwell	225
EFFECT OF AGE AND CONDITION-TEST INTERVAL (DAYS) ON AN AUDIO-CONDITIONED CONVULSIVE RESPONSE IN CF#1 MICE	W. B. Iturrian, G. B. Fink	230
PARENTAL ADMINISTRATION OF RESERPINE: EFFECT UPON HATCHING, BEHAVIOR, AND BRAINSTEM CATECHOLAMINES OF THE YOUNG CHICK	S. B. Sparber, F. E. Shideman	236
GENETIC-ENVIRONMENTAL INTERACTION IN "INTELLIGENCE": II. MODELS OF BEHAVIOR, COMPONENTS OF VARIANCE, AND RESEARCH STRATEGY	Gordon M. Harrington	245
INFANT MONKEY HEART RATE: HABITUATION AND EFFECTS OF SOCIAL SUBSTITUTES	Douglas K. Candland, William A. Mason	254
TEMPERATURE REDUCTION IN NEONATAL MICE: EFFECTS ON LATER BEHAVIOR	Burton N. Haggett, Jack Werboff	257
EYE MOVEMENT DURING SLEEP AND WAKING IN INFANT MONKEYS (MACACA MULATTA) DEPRIVED OF PATTERNED VISION	Ralph J. Berger, Gilbert W. Meier	266
RABBIT EYELID CONDITIONING: EFFECTS OF AGE, INTERSTIMULUS INTERVAL, AND INTERTRIAL INTERVAL	Peter W. Frey, Leonard E. Ross	276
PRIMIPAROUS AND MULTIPAROUS MONKEY MOTHERS IN A MILDLY STRESSFUL SOCIAL SITUATION: FIRST THREE MONTHS	G. Mitchell, C. W. Stevens	280
BEHAVIOR OF UNDISTURBED 1- TO 10-DAY-OLD CHICKS IN DIFFERENT REARING CONDITIONS	D. M. Broom	287
Book Notices		296
Announcements		298
Author Index		299
Subject Index		301

1. The first of these is the fact that the...
2. The second is the fact that the...
3. The third is the fact that the...
4. The fourth is the fact that the...
5. The fifth is the fact that the...
6. The sixth is the fact that the...
7. The seventh is the fact that the...
8. The eighth is the fact that the...
9. The ninth is the fact that the...
10. The tenth is the fact that the...
11. The eleventh is the fact that the...
12. The twelfth is the fact that the...
13. The thirteenth is the fact that the...
14. The fourteenth is the fact that the...
15. The fifteenth is the fact that the...
16. The sixteenth is the fact that the...
17. The seventeenth is the fact that the...
18. The eighteenth is the fact that the...
19. The nineteenth is the fact that the...
20. The twentieth is the fact that the...
21. The twenty-first is the fact that the...
22. The twenty-second is the fact that the...
23. The twenty-third is the fact that the...
24. The twenty-fourth is the fact that the...
25. The twenty-fifth is the fact that the...
26. The twenty-sixth is the fact that the...
27. The twenty-seventh is the fact that the...
28. The twenty-eighth is the fact that the...
29. The twenty-ninth is the fact that the...
30. The thirtieth is the fact that the...

